Multi-pass TOF offline calibration

TofReconstruction

Track Selection

Veff calculation

Veff stable? — No

Yes

Charge of MIP

Attenuation Length

T0

Time Walk

T0

T0 stable? — No

Yes

Time Walk Stable? — No

Yes

Ch-to-Ch offsets

Write to DB

TofReconstruction

Geometry model

TAC Calibration

Speed of light

MIP Charge

Attenuation length

Time walk

Ch-to-Ch offsets

Time dependent pedestals

Text database
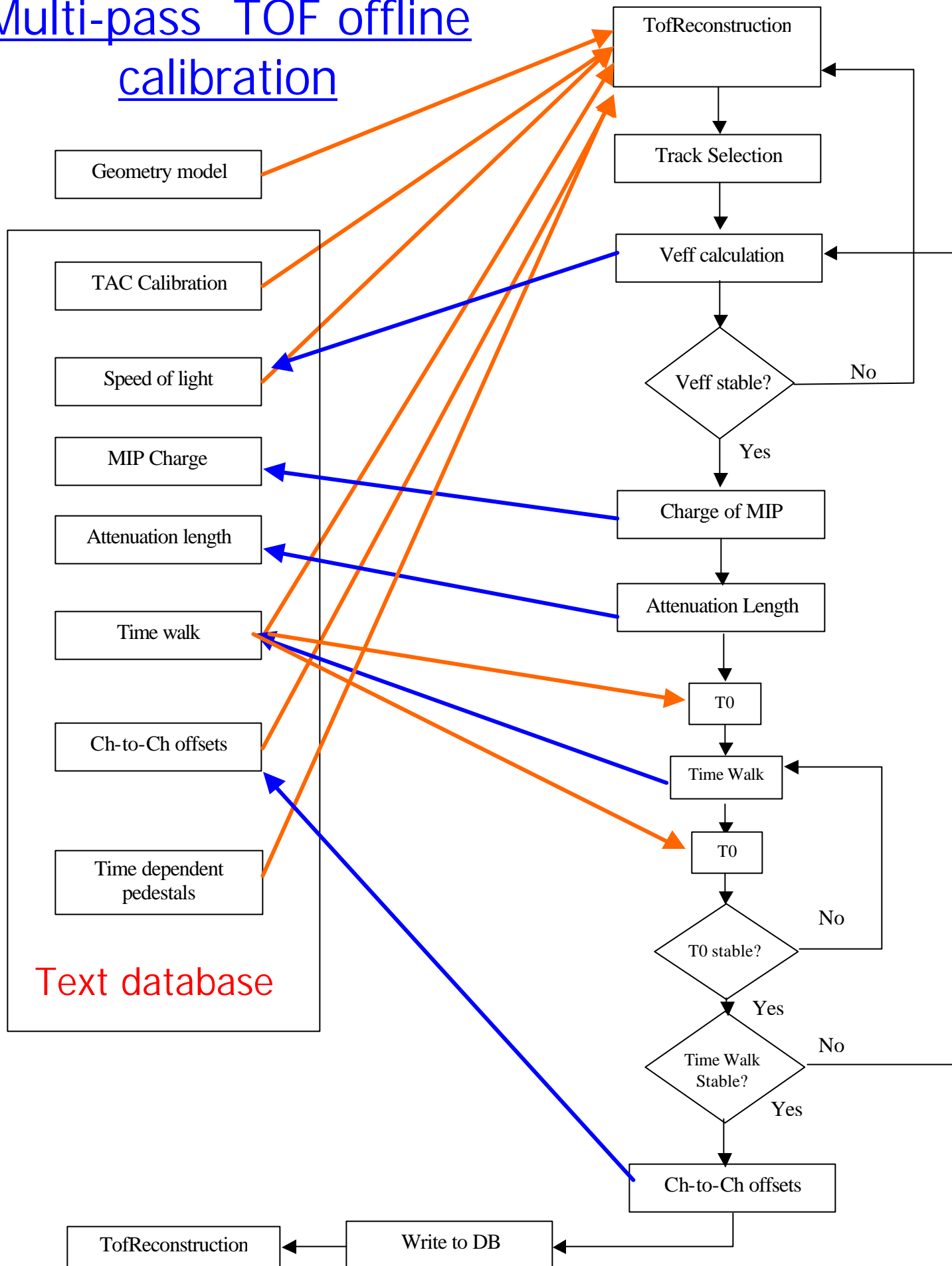
Calibration Validation

Benchmarks:

- Time difference between corrected TOF (raw TDC time after applying calibrations) and predicted TOF for several particle samples. (Optional calibration method)

- Mass distribution plot from TOF measurement.

Plans

- ☐ Generic samples ✔
- ☐ Particle samples (Ks, λ,…)
- ☐ In parallel:
  - ○ Full standalone analysis (root+n-tuple)

  Goal: compare possible algorithms and produce sensible numbers
  - ○ Analysis automation (integration offline code)

  Goal: Reproduce standalone analysis results.